

REMARKS

I. REPLY TO OBJECTION TO THE ABSTRACT

The abstract was objected to on the ground of being two paragraphs in length. In reply the original abstract has been replaced with a single paragraph abstract.

II. REPLY TO REJECTION OF CLAIMS 1-4, 6 & 14 MADE UNDER 35 USC §103(a)

Claims 1-4, 6 & 14 have been rejected under 35 USC §103(a) as being unpatentable over US Patent No. 6,223,010 to Araki (hereinafter referred to as “the ‘010 patent” or “Araki”) in view of US Patent No. 6,609,044 to Basista et al (hereinafter referred to as “the ‘044 patent” or “Basista”) and US Patent No. 4,549,066 to Piccioli et al (hereinafter referred to as “the ‘066 patent” or “Piccioli”). The Office Action alleges that:

Araki discloses a resin product with the method and apparatus used for dissemble. The Cartridge is cut with a laser.

Araki does not teach the use of a computer or a gimbal (that rotation of the part).

Basista et al. discloses the used of a computer and an associated program for laser cutting.

* * *

Piccioli et al. discloses the cutting of a molded polyester resin product using a laser. The polyester resin product is rotated while the laser cuts the excess product off.

Based on those allegations the Office Action then concludes that it would have been obvious “to use a computer and cutting program as taught by Basista et al. in the Araki system

because it would ensure cutting accuracy and decrease processing time. Allegedly, the controlling rule of law is that “provision of mechanical or automated means to replace a manual activity . . . [is] . . . obvious.”

In reply Applicant emphasizes that Basista ‘044 is directed and limited to a cutting apparatus . . . that optimizes the amount of time required to perform all of the required cuts in a piece of sheet material.” Abstract, lines 1-3; [1:10-15; 3: 5-10]. Although Basista includes 27 sheets of drawings and 28 columns of written description, none discusses or illustrates any application to any material other than a flat sheet. Thus, Basista ‘044 has no disclosure and no teaching about cutting of “containers having interfacing thermoplastic joining surfaces” as is required by all of these rejected claims. As such there is no reasonable basis to conclude that using Basista’s computer cutting program in the Araki system would yield the presently claimed inventions. To the contrary, a failed effort would result.

It is abundantly clear that Basista’s computer cutting program directs a laser cutter over only a flat surface, and not the joining surfaces of a container. The movement of Basista’s apparatus is in only two dimensions: the x and y planes; but to cut the joining surfaces of a container it is necessary to have movement in three dimensions: the x, y and z planes as would be the reference planes in a Cartesian coordinate system. Any predetermined light path generated from any Basista teaching would not and could not be adapted for disassembling containers. In order to disassemble containers there must be a capability and teaching to either move the laser cutting apparatus or the container in a third dimension, but there is no such capability or teaching in Basista. As is clearly shown and described, the laser head and the material’s surface move in only two dimensions relative to each other during cutting. See, e.g., Figures 5A, 5B, 9A and 9B where the cuts always are in a single plane and the cutting laser head

always has the same relative position to the material's surface – it is always above. There is not capability for the cutting head to travel around the sides and then over the back side of the sheet. Thus, if a container was put in the path of the laser cutter of Basista, only a single side of the container's surface would be disassembled, which necessarily means that the container's joining surfaces would not be cut, there being three such surfaces that would remain undisturbed. For example, if a rectangular cross-sectioned container were subjected to the system and process suggested in the Office Action, only one of four sides of the container would be cut or disassembled. However, these rejected claims do not call for disassembling only one side of the container; rather, they require disassembling containers that have joining surfaces and along the jointing surfaces. In order to disassemble such a container, it is necessary to cut through a third dimension by either moving the container or by moving the laser relative to each other. No structure and no method capable of such actions is disclosed or taught in either of Basista or Araki.

As explained in the reply to the prior, August 9, 2005, Office Action, Piccioli '066 does not disclose any cutting of any container have interfacing thermoplastic joining surfaces. As such it contributes nothing meaningful to the issue of obviousness presently under consideration.

For all of the above reasons it is believe that the rejection should be withdrawn.

III. REPLY TO REJECTION OF CLAIMS 7 & 9-13 MADE UNDER 35 USC §103(a)

Claims 7 and 9-13 have been rejected under 35 USC §103(a) as being unpatentable over Araki '010 in view of US Patent No. 6,864,294 to Koike et al (hereinafter referred to as "the '294 patent" or "Koike").

Koike '294 and its non-applicability to these rejected claims has been explained in detail in the reply to the prior August 9, 2005, Office Action, and Applicant incorporates those remarks by reference, as if set forth fully herein. In that regard Applicant would emphasize one element of the rejected claims for which there is no disclosure or teaching in Koike '294, and that therefore *prima facie* obviousness has not been established in the Office Action. These rejected claims require a disassembled container having the interface of its joining surfaces "cut through with a laser beam". Assuming, *arguendo*, that all other limitations of the claim were obvious, nevertheless Koike does not cut through the joining surfaces of containers. Rather, the cutting is made in relation to the location of components inside of the containers that can re-used. Thus, the location of Koike's cutting is completely independent of and unrelated to the location of the joining surfaces of the container. As such, it is readily apparent that any notion that Koike's cutting is directed to the joining surfaces is a product of either hindsight or the Applicant's own specification.

For all of the above reasons it is requested that the rejection be withdrawn.

IV. REPLY TO REJECTIONS OF CLAIMS 5 AND 8

Claims 5 and 8 depend from claims 1 and 7, respectively. In reply Applicant incorporates by reference, as if set forth fully herein, the replies set forth above made in reply to the rejections of independent claims 1 and 7.

V. AUTHORIZATION TO CHARGE FEES

If any fees are due in regard to the present reply, authorization is hereby granted to charge Deposit Account 50-3725.

VI. CONCLUSION

For all of the above reasons it is requested that the rejections be withdrawn and that a Notice of Allowance of all pending claims be forthcoming.

Respectfully submitted,

LEWIS BRISBOIS BISGAARD & SMITH LLP

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By:


Jon E. Hokanson
Reg. No. 30,069

LEWIS BRISBOIS BISGAARD & SMITH LLP
221 N. Figueroa Street, Suite 1200
Los Angeles, California 90077
(213) 250-1800